

REMARKS

Claim 1 has been amended to include “charging the irradiated area of the mold by generating charged and scattered substances on the surface of the laser irradiated area of the polymeric mold.” This limitation is a characteristic of the reaction mechanism utilized by applicants. This amendment should be entered after the final rejection because the amendment places the claims in better form for consideration. Specifically, the Examiner stated in the final office action that the claims do not include a limitation directed to different reaction mechanisms than those presented in Boeke and Hirsch. Claim 1 now includes such a limitation.

Claims 1-8 stand rejected under 35 USC 103(a) as being unpatentable over Boeke in view of Hirsch and Hiraoka. This rejection is respectfully traversed.

Claim 1 recites a method for electroless plating that includes adding an inorganic filler to a polymeric material, molding the material to obtain a polymeric mold, and irradiating the mold with a laser having a wavelength of 600 nm or shorter. Claim 1 has been amended to also include “charging the irradiated area of the mold by generating charged and scattered substances on the surface of the laser irradiated area of the polymeric mold.”

As described in the specification, when a mold with the claimed filler is irradiated with a laser having a wavelength of 600 nm or shorter, charged and scattered substances are produced on the surface of the mold. The claimed filler limits the location of the charged and scattered substances to the irradiated region. A noble metal can then be deposited on the irradiated region of the mold by immersing the mold in an ionic noble metal aqueous solution.

The Examiner maintains that Boeke teaches adding an inorganic filler to a polymeric material and irradiating the molded material with a laser before electroless plating. As the Examiner admits, Boeke fails to disclose using a laser with the claimed wavelength to irradiate the mold. However, modifying Boeke in the manner suggested by the Examiner would not have been obvious because the process disclosed in Boeke operates in a different manner than the process claimed by applicants.

The process in Boeke does not operate by producing charged and scattered substances on the surface of the polymeric material. The process in Boeke operates by producing localized heat effects produced by long wavelength lasers. These long wavelengths cannot be used to produce the charged and scattered substances obtained by using a laser with the claimed wavelength.

The Examiner states that Hiraoka discloses using a YAG laser with a wavelength under 600 nm as claimed. It is the Examiner's contention that it would be obvious to modify Boeke in accordance with Hiraoka to include a laser with the claimed wavelength. However, as explained above, the process in Boeke does not utilize charge debris for electroless plating but rather localized heat effects obtained using infrared lasers. Accordingly, it would not have been obvious to modify Boeke to use a laser with the claimed wavelength since the claimed wavelength is outside the infrared wavelengths used to produced the heat effects obtained in Boeke.

In addition, modifying Boeke to utilize a laser having a wavelength of 600 nm or less to produce charged and scattered substances would not have been obvious because neither Boeke nor Hiraoka disclose that an inorganic filler can be used to limit the production of charged and scattered substances. Although Boeke states that an inorganic filler can be added to the polymeric material, no specific significance is attributed to adding this material. Absent applicants' disclosure that teaches that the area of charged and scattered substances can be limited with an inorganic filler, there would have been no motivation to modify the process described in Boeke to utilize a laser with a wavelength of 600 nm or less.

The Examiner utilizes Hirsch only to disclose using an aqueous palladium solution for electroless plating. Hirsch does not provide any teaching or motivation to modify the process disclosed in Boeke to include irradiating the surface of a polymeric material with a laser of the claimed wavelength.

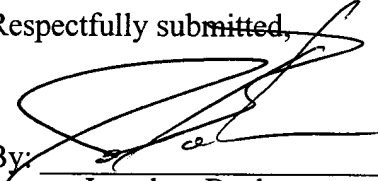
Since it would not have been obvious to modify the process disclosed Boeke to use a laser with the claimed wavelength, claim 1 should be allowed. Claims 2-8, which depend from claim 1, should be allowed for at least the same reason.

For the foregoing reasons a Notice of Allowance is solicited.

Applicants petition for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952**, referencing docket no. 204552022500.

Dated: October 17, 2003

Respectfully submitted,

By: 

Jonathan Bockman
Registration No. 45,640

Morrison & Foerster LLP
1650 Tyson Blvd, Suite 300
McLean, Virginia 22102
Telephone: (703) 760-7700
Facsimile: (703) 760-7777